DOCUMENT RESUME

ED 407 548 CE 073 975

AUTHOR	Nolin, Mary Jo; And Others
TITLE	Student Participation in Community Service Activity. 1996 National Household Education Survey. Statistical Analysis Report.
INSTITUTION	Westat, Inc., Rockville, MD.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	NCES-97-331; ISBN-0-16-049044-8
PUB DATE	Apr 97
NOTE	49p.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Research (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Citizenship Education; *Educational Practices; Elementary Secondary Education; School Community Programs; School Community Relationship; Secondary Education; *Service Learning; *Student Participation; Student Volunteers
IDENTIFIERS	National Household Education Survey; *Youth Community Service

ABSTRACT

A study used data from the 1996 National Household Education Survey, Youth Civic Involvement component, to determine how students in grades 6-12 were involved in community service activities and how schools might encourage community service participation and integrate it with classroom learning. Some of the results are as follows: (1) about half the students interviewed in grades 6-12 said they participated in community service during the 1995-96 school year; (2) native English-speaking, female, white, 11th- and 12th-grade students who received high grades and were involved in many activities were most likely to participate; (3) students attending a private or church-related school whose parents had college degrees and who participated in community service were most likely to participate; (4) 86 percent of all students were in schools that encouraged community service, either through requiring participation or by arranging or offering it, and students in these schools were more likely to participate; (5) public schools were more likely to arrange but not require community service, whereas private schools were split between those that arranged community service and those that required it; and (6) about half the students who participated regularly in community service said that their service was incorporated into the school curriculum (service learning). (30 references) (KC)

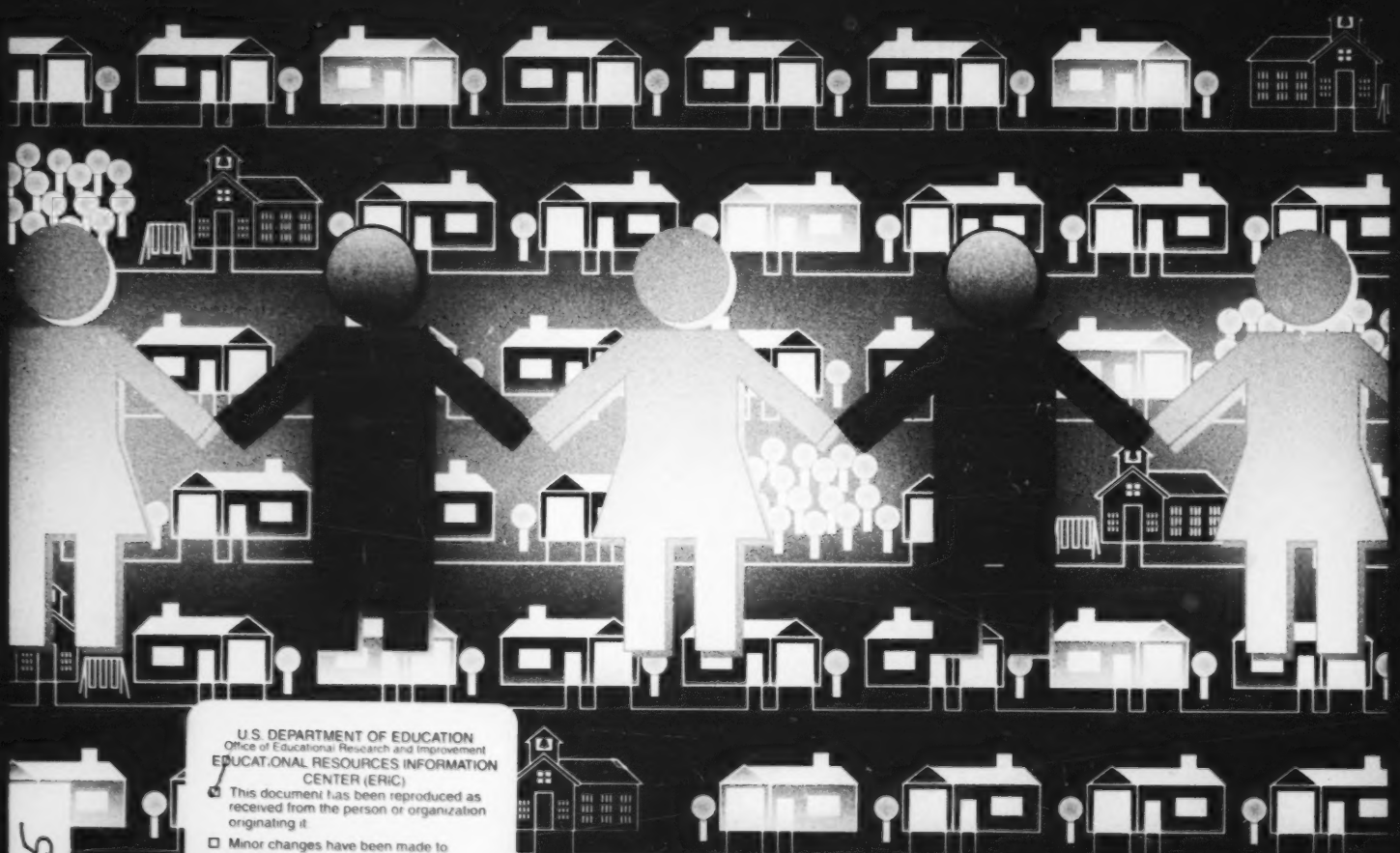
****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

CE
ED 407 548

NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report April 1997

STUDENT PARTICIPATION IN COMMUNITY SERVICE ACTIVITY



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CE073975

BEST COPY AVAILABLE

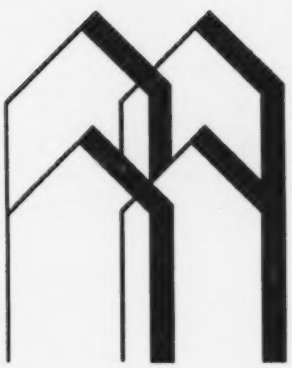
U.S. Department of Education
Office of Educational Research and Improvement NCES 97-331

NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report April 1997

1996 National Household Education Survey

Student Participation in Community Service Activity



National Household Education Survey

Mary Jo Nolin and Bradford Chaney
Westat, Inc.

Chris Chapman
Education Statistics Services Institute

Kathryn Chandler, Project Officer
National Center for Education Statistics

U.S. Department of Education
Office of Educational Research and Improvement NCES 97-331

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Ramon C. Cortines
Acting Assistant Secretary

National Center for Education Statistics
Pascal D. Forgione, Jr.
Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Office of Educational Research and Improvement
U.S. Department of Education
555 New Jersey Avenue, NW
Washington, DC 20208-5574

April 1997

Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *Student Participation in Community Service Activity*, NCES 97-331, by Mary Jo Nolin, Bradford Chaney, and Chris Chapman. Project Officer, Kathryn Chandler. Washington, DC: 1997.

Contact:
Kathryn Chandler
(202) 219-1767
(e-mail) nhes@ed.gov
http://www.ed.gov/NCES/NHES

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-049044-8

Acknowledgments

The authors would like to thank Ethel Sanniez and Susan Gilmore of Westat as well as Amanda Miller of the Education Statistics Services Institute for their research assistance. We would also like to thank James Kielsmeier of the National Youth Leadership Council and the University of Minnesota for his invaluable insights on the subject of community service and his careful reading of early drafts of this report.

We are grateful for the encouragement provided by Martin Orland at the National Center for Education Statistics to expand upon earlier analysis. Maureen Treacy, also at the Center, and Gerard Devlin and Philip Carr at the Office of Educational Research and Improvement deserve special mention for helping to assure that publication remained on an expedited schedule.

The report was reviewed by the following staff members of the National Center for Education Statistics: Marilyn McMillen, Mary Frase, Jeffrey Owings, Steven Kaufmann, Michael Cohen, and Daniel Kasprzyk. The report was also reviewed by Mary Jane Turner of the Close Up Foundation, Lisa Hicks of Jobs for the Future, and Saundra Murray Nettles of the University of Maryland. The authors appreciate the thorough reading and thoughtful suggestions provided by these reviewers. Their input substantially improved the publication. Any remaining errors or problems are the sole responsibility of the authors.

Highlights

- About half (49 percent) of students in 6th through 12th grade said they already participated in community service at some time during the 1995-96 school year. They were interviewed over the period January 2, 1996, through April 13, 1996, so some additional students may have participated later in that school year.

    - Females, white students, students for whom English was the primary language they spoke at home, students who received high grades, and 11th and 12th graders were most likely to participate.

    - The greater the number of other activities the students participated in (student government, other school activities, non-school activities, and working for pay), the more likely they were to participate in community service.

    - Students were also more likely to participate if an adult in the household participated in community service, and the highest degree held by a parent was a college degree or higher.

    - Students were more likely to participate if they attended private (especially church-related) schools. The relationship between school type and participation persisted in a multivariate analysis that adjusted for differences in school policies and student, family and community characteristics.

- Eighty-six percent of all students were in schools that encouraged community service, either through requiring participation or by arranging or offering community service.

    - Students who were in schools that arranged or offered community service were more likely to participate than students in other schools.

    - Students' participation in community service did not vary significantly based on schools' requirements that students participate.

    - The relationships between school practices and student participation continued to hold after statistically adjusting for key characteristics of the students, their families, and their schools.

    - Public school students tended to be in schools that arranged but did not require community service, while private school students were split between schools that only arranged community service and schools that both arranged and required community service.

- About half (56 percent) of the students who participated regularly in community service said that their service was incorporated into the school curriculum in some way (service-learning).

    - Students were more likely to encounter service-learning if they were at schools that both required and arranged community service than at schools that only arranged community service.

Table of Contents

Acknowledgments iii
Highlights v

Introduction 1

Previous Research 1
Data Sources and Indicators 3

Level of Participation 4

Plans to Participate Next Year 7
Student Characteristics 8
Alternative Student Activities 9
Family Characteristics 11
Community Characteristics 13
School Characteristics 13

School Practices to Encourage Participation and Learning 15

Relationship Between School Policies and Student Participation 16
Types of schools promoting community service 19
The impact of adults as examples 21
A Multivariate Test of the Relationship Between School Policies and Student Participation 21
Incorporating Community Service into the Curriculum 24

Summary and Conclusions 27

Survey Methodology and Data Reliability 29

Response Rates 30
Data Reliability 30
Weighting and sampling errors 32
Nonsampling errors 33
Hours of Service Measure 34
Students' Expectations of Serving Later in the School Year 35
Multivariate Analysis 35

References 38

List of Tables

Table 1.— Percent of students in grades 6 through 12 and their reported community service participation, by selected student characteristics: 1996 5

Table 2.— Percent of students in grades 6 through 12 and their reported plans for community service participation next year, by community service participation in the current year: 1996 7

Table 3.— Percent of students in grades 6 through 12 and their reported community service participation, by selected student activities: 1996 10

Table 4.— Percent of students in grades 6 through 12 and their reported participation in community service, by selected household characteristics: 1996 12

Table 5.— Percent of students in grades 6 through 12 and their reported community service participation, by selected community characteristics: 1996 14

Table 6.— Percent of students in grades 6 through 12 and their reported participation in community service, by selected school characteristics: 1996 15

Table 7.— Community service participation of students in grades 6 through 12, by reported school practices to promote student community service: 1996 17

Table 8.— Hours of regular community service participation in the current school year for students in grades 6 through 12, by reported school practices to promote student community service: 1996 19

Table 9.— Percent of students in grades 6 through 12 who reported school practices to promote student community service, by student's grade and school type: 1996 20

Table 10.— Community service participation of students in grades 6 through 12, by participation in community service of adults in the household and by school practices to promote community service: 1996 22

Table 11.— Logistic regression analysis to predict student participation in community service 23

Table 12.— Percent of students in grades 6 through 12 participating in community service who reported incorporation of community service in the curriculum, by school practices to promote student community service: 1996 25

Table 13.— Logistic regression analysis to predict student participation in community service (full model, including variables that were not statistically significant) 37

List of Figures

Figure 1.— Percent of 6th through 12th grade students and their total hours of participation in regular community service during the current school year: 1996 6

Figure 2.— Percent of students in grades 6 through 12 who reported various school practices to promote community service: 1996 16

List of Exhibits

Exhibit 1.— Item response rates for variables used in the analysis 31

Introduction

Increasing community service participation has long been a goal in the United States. Some examples of how this goal has played out in national policy are President Kennedy's creation of the Peace Corps, President Bush's creation of the Points of Light Foundation, President Clinton's creation of AmeriCorps, and Congress' adoption of the National Education Goals, which include the objective that all students will be involved in activities that promote and demonstrate good citizenship and community service. In part, the push for volunteer service reflects the idea that the act of volunteering would be beneficial to those who participate and might counteract feelings of cynicism and apathy, as well as the notion that volunteers are needed if national problems are to be addressed with limited government resources. As in the National Education Goals, youth are often made a special focus because they are at a time in their lives when their attitudes are still being formed so volunteer service might have greater effect. In that context, volunteer service has also been seen as a tool for teachers to build interest in classwork and thus becomes an aspect of education reform.

While volunteer service is widely accepted as desirable, there is a debate over how best to encourage it. This debate influences the field of education in a number of ways, including the types of volunteer policies schools develop. These policies can range from requiring service of all students, to arranging service for interested students, to doing nothing to encourage service. Some schools try to incorporate student service experiences into class work, while others do not.

This report examines data from the 1996 National Household Education Survey, Youth Civic Involvement component, in which students in grades 6 through 12 were asked about their participation in community service activities. Additionally, youth were asked about some of the ways that schools might encourage community service participation and integrate it with classroom learning. From these data, one can examine the relationship between community service participation and school practices, as reported by the students. The data also provide information about how participation in community service activities is related to student, family, community, and school characteristics.

Previous Research

Proposals that community service should be an integral aspect of education have been part of the American educational debate since the early years of this century, sometimes capturing the public attention and sometimes receding in importance (Barber 1992; Conrad and Hedin 1991; Boyer 1983; Kraft 1996). Proponents emphasize the potential benefits of community service in terms of linking the school to the community and providing students with an opportunity for experiential learning (Kraft

1996). Properly implemented, community service also may reduce the alienation from society that adolescents often experience, help young people to develop community-oriented attitudes, and encourage them to become engaged in democratic processes, such as voting, when they are young adults (Calabrese and Schumer 1986; Conrad and Hedin 1991; Kraft 1996). When integrated into the curriculum, community service is a strategy for preventing school dropouts and improving the transition from school to work (Shumer 1994; Gomez 1996; Scales and Blyth 1997).

Studies of the effects of community service programs indicate that they can have important and measurable positive outcomes for high school students. For instance, in a study of 10 programs, participating students were found to have experienced more psychological, social, and intellectual growth than nonparticipating students (Conrad and Hedin 1982). Another study reported that students who did volunteer work developed a more socially responsible perspective than students who did not participate in volunteer activities (Hamilton and Fenzel 1988). In a related study of over 2,000 K-12 students from 24 schools, University of Wisconsin researchers found improved student performance resulted from active learning such as service-learning if combined with high intellectual content (Newman, Markes, and Gamoran 1995). A quantitative evaluation of a community-based learning program for 9th through 12th grade students, which incorporated participation in service activities in the community, showed a positive effect on students' grades and attendance, both of which were related to academic achievement and retention in school (Shumer 1994). Studies of college undergraduates have shown specific cognitive development, especially an increase in awareness of the multidimensionality of social problems and community-oriented decisionmaking, as an outcome of participation in community service (Batchelder and Root 1994), as well as increased personal efficacy, commitment to future service, and recognition of the importance of influencing the political system to ameliorate social problems (Giles and Eyler 1994).

To encourage greater participation in community service and service learning, the state of Maryland and some school districts have instituted mandatory service requirements in public schools. In some instances this decision has provoked initial opposition from members of the academic community and from some parts of the general public who view mandatory community service as involuntary labor that students may resent and that would increase the cost of education (Short Sentence 1992; Goldsmith 1995). However, in recent years, more education leaders have recognized the academic benefits to students of integrating community service activities into the classroom. This has come to be known as service-learning. The Commission on National and Community Service (now the Corporation for National Service) defines service-learning as an educational experience that, among other things, is integrated "into the student's academic curriculum or provides structured time for a student to think, talk, or write about what the student did and saw during the actual service activity" (Commission on National and Community Service 1993).

Involving America's students in community service activities is one of the first objectives that was established under one of the National Education Goals for the year 2000, that of preparing students for responsible citizenship, but national data on the percentage of youth who participate in community service are sparse. Most estimates of the participation of adults and youth in community service have been based on institutional surveys; however, it is difficult to capture through institutional surveys the number of students who engage in community service activities, particularly those who do not participate through school programs and those who participate in programs that do not receive external funding (Kraft 1996). A notable exception is a set of national surveys sponsored by Independent Sector that examine volunteering and giving among teenagers.[1]

Data Sources and Indicators

The National Household Education Survey (NHES), a large national study of adults and youth conducted by Westat for the National Center for Education Statistics, provides data to meet this research need. In 1996, following screening interviews conducted in 55,708 households, telephone interviews were conducted with 2,250 randomly sampled adults, 20,792 parents of children age 3 through 12, and 8,043 students in grades 6 through 12. This report is based primarily on data collected from the students.[2] A more detailed discussion of survey methodology, including response rates and data reliability, can be found in the section on survey methodology.

Each student was asked whether he or she had participated in any community service activity during the current school year. The activity could have been associated with the student's school, service sponsored by another social institution such as a church or synagogue, or volunteer work in which the student participated on his or her own. Service programs vary widely in nature, from one-time opportunities to clean up a park or contribute canned food to a weekly commitment to tutor other students or visit senior citizens. The NHES:96 captured an aspect of this variation by asking students if their community service activities happened once or twice during the school year or on a regular basis. To help analyze student involvement in service-learning, students who said they participated in community service were asked whether they had a chance to talk about their service activity in class, whether they were required to write about the experience, or whether participation in the activity contributed to their grade in a class. These basic reflection activities characterize what are considered best practices for service-learning (Honnet and Paulson 1989; Alliance for Service-Learning in Education Reform 1993; Cairn and Kielsmeier 1991). Students who said that they had not yet

---

[1] These surveys are titled *Volunteering and Giving Among American Teenagers, 1992* and *Volunteering and Giving Among American Teenagers, 1996*.

[2] Youth who were schooled at home were not included in this analysis because they were not asked many of the items that are central to this report.

participated in a service activity during the current school year were asked whether they would participate in a service activity sometime before the end of the current school year. All students, regardless of their participation status, were asked whether their schools arranged for student service activities or provided service opportunities at schools.[3] In a separate question youth were asked if their school required students to participate in community service (e.g., in order to graduate). All students also were asked if they thought they would be doing any kind of community service in the next year.

Level of Participation

An estimated 49 percent of students in grades 6 through 12 reported that they participated in a community service activity during the 1995-96 school year (table 1).[4] They were interviewed over the period January 2, 1996, through April 13, 1996, so some additional students may have participated later in that school year. The students were split fairly evenly between those who participated only once or twice (23 percent) and those who participated more regularly (26 percent). No attempt was made to define "regular" participation more specifically because of the many types of participation that would appropriately be considered regular, including spending several hours during 1 day each month working in a nursing home, babysitting toddlers during church services each week, or reading to younger students for 20 minutes on 2 or 3 school days each month. However, information on the total number of hours of regular participation was collected. With the school year not yet completed, 12 percent of regular participants reported already volunteering more than 30 hours, and nearly 20 percent had volunteered more than 10 hours (figure 1).

---

[3] No distinction was made in the questionnaire between these two related ways of encouraging student participation. Thus, throughout this report references to arranging activities also includes providing them.

[4] Given that the NHES survey focused on volunteer activity during the school year, this estimate is roughly comparable to an Independent Sector report (1996b) indicating that 59 percent of teenagers volunteered sometime during the entire year prior to their interview.

Table 1.—Percent of students in grades 6 through 12 and their reported community service participation, by selected student characteristics: 1996

Characteristic	Number of students (thousands)	Participated by time of interview[1]						Will participate before the end of the school year[2]		Will not participate this school year	
		Regular participation		One or two times		Total (any participation)					
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	25,726	26	0.6	23	0.6	49	0.7	31	0.7	20	0.6
Student's grade[3]											
6-8	11,535	23	0.9	24	0.9	47	1.1	34	1.1	19	0.9
9-10	7,429	24	1.0	22	1.0	45	1.0	35	1.3	20	1.0
11-12	6,760	32	1.3	24	1.4	56	1.4	22	1.1	22	1.1
Student's academic performance[4]											
Mostly A	8,689	33	1.2	27	1.1	60	1.3	26	1.3	13	0.8
Mostly B	9,833	24	1.0	24	1.1	48	1.3	32	1.1	20	0.9
Mostly C	5,809	19	1.0	19	1.3	38	1.4	36	1.5	26	1.4
Mostly D or F	1,394	16	2.4	15	2.0	30	3.0	37	3.4	33	2.8
Student's sex											
Male	13,190	22	0.7	23	0.8	45	0.9	32	0.8	23	0.8
Female	12,537	29	0.9	24	0.8	53	1.1	31	1.0	16	0.8
Student's race/ethnicity											
White, non-Hispanic	17,322	27	0.7	25	0.7	53	0.9	28	0.8	20	0.7
Black, non-Hispanic	4,112	22	1.7	21	1.8	43	1.9	39	2.0	18	1.6
Hispanic	3,281	21	1.6	17	1.3	38	1.8	40	1.9	22	1.5
Other	1,012	27	2.4	23	2.9	50	3.0	26	2.4	24	2.9
Language spoken most at home by student											
English	24,164	26	0.6	24	0.7	50	0.8	30	0.7	20	0.6
Other	1,562	15	1.9	16	2.0	32	2.5	45	2.7	23	2.2

[1] Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2] Only students who had not done community service by the time of the interview were asked this question.

[3] One case was coded ungraded, no equivalent. It was not included in this analysis.

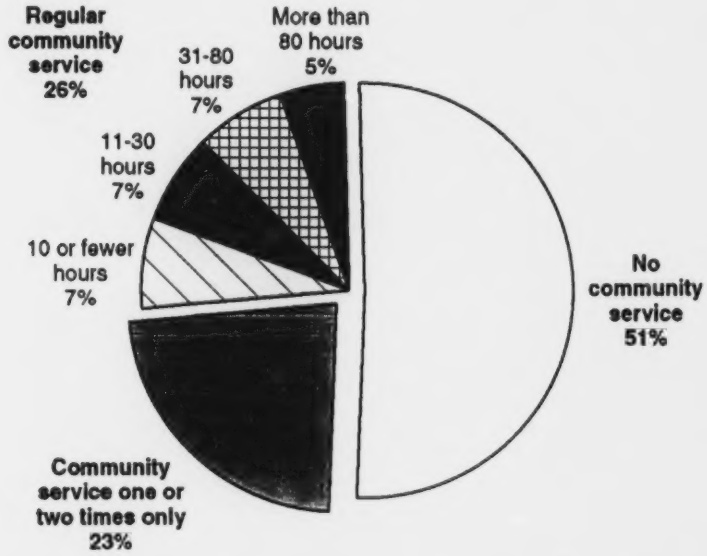
[4] This variable is from the NHES:96 Parent and Family Involvement in Education/Civic Involvement (PFI/CI) data file.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

BEST COPY AVAILABLE

Figure 1.—Percent of 6th through 12th grade students and their total hours of participation in regular community service during the current school year: 1996


Regular community service 26%
More than 80 hours 5%
31-80 hours 7%
11-30 hours 7%
10 or fewer hours 7%
No community service 51%
Community service one or two times only 23%

NOTE: Standard errors are as follows: no community service, 0.7; community service one or two times only, 0.6; regular community service, 0.6; 10 or fewer hours, 0.3; 11-30 hours, 0.3; 31-80 hours, 0.4; more than 80 hours, 0.3.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

In addition to those students who said they already had participated in community service, another 31 percent said they had not yet participated but that they planned to before the school year was completed. This response option was provided because the survey was conducted sometime between January 2, 1996, and April 13, 1996, so there still may have been considerable time to participate in such activities. Depending on when the students were interviewed, between 10 percent and 50 percent of the school year remained. However, students' reported plans to participate should not be considered as definite as the other responses. Many people make plans that they do not fulfill. Also, some students may have said they planned to participate in order to please the interviewer (i.e., to give a socially desirable response), rather than because they really expected to follow through. The methodology section of this report provides data suggesting that many of these students ultimately did not participate in community service during the school year. This report, therefore, focuses on those students who already had participated as being the best measure of student participation.

Plans to Participate Next Year

Students also were asked if they planned to participate in community service in the next school year. Since students' expectations of participating later in the school year may often have been left unfulfilled, it is difficult to evaluate the accuracy of students' projections for the next year. Still, it appears that once students start participating, they generally expect to continue (table 2). Of those who already participated regularly in community service, 92 percent expected to also participate in the next year. A comparable percentage (89 percent) of those who had participated once or twice also expected to participate again in the next year.[5] Students who expected to participate by the end of the school year were less likely to say they would participate the next year (84 percent) than students who had participated (91 percent), and students who neither participated nor planned to participate later in the school year were the least likely to expect to participate (49 percent).

Table 2.—Percent of students in grades 6 through 12 and their reported plans for community service participation next year, by community service participation in the current year: 1996

Characteristic	Number of students (thousands)	Student plans to do community service next year		Student does not plan to do community service next year	
		Percent	s.e.	Percent	s.e.
Total	25,726	80	0.6	20	0.6
Community service participation					
Any participation by time of interview[1]	12,627	91	0.5	9	0.5
Regular	6,596	92	0.7	8	0.7
1 or 2 times	6,031	89	0.9	11	0.9
Will participate later this school year[2]	8,005	84	0.9	16	0.9
No participation this school year	5,094	49	1.8	51	1.8

1 Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

2 Only students who had not done community service by the time of the interview were asked this question.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

5 Given these high percentages, an analysis was performed to examine the possible effect of incorporating community service into the curriculum on students' expected participation the next year. For those students who had already participated (these were the only students asked about curriculum incorporation), the expectation of participating in the next year was uniformly high (ranging from 88 to 93 percent) regardless of the ways in which the curriculum was involved.

Student Characteristics

Student characteristics are likely to be related to community service participation. Such characteristics as the students' race/ethnicity, grade level, and school performance are often related to the resources available to the students (e.g., for transportation or for clothing or supplies used in the service), students' knowledge of and access to community service opportunities (e.g., based on contacts through family or friends), and students' skills and attitudes that may affect community service (e.g., self-esteem and self-efficacy). A recent study by Independent Sector (1996b) shows a relationship between one student characteristic — race/ethnicity — and community service, with blacks and Hispanics being less likely to participate than whites.

Using a broad range of student characteristics, the current study confirms that some types of students are more likely to participate than others (table 1). There was an especially strong relationship between students' academic performance and their participation, with 60 percent participating among students who reported receiving mostly As, compared with 48 percent of those receiving mostly Bs, 38 percent of those receiving mostly Cs, and 30 percent of those receiving mostly Ds and Fs. It is not possible from the data to determine the direction of the relationship; Shumer (1994) found that participation had a positive effect on school grades, but other factors that are related to grades (such as household income and the education level of adults in the household, both of which precede student participation) also are related to student participation. It may be that both explanations are correct: student participation may affect student grades, while the kinds of students who participate may also be the ones more likely to receive high grades.

Students were also more likely to participate if they were female (53 percent) than male (45 percent), white (53 percent) rather than black or Hispanic (38-43 percent), and if English was the primary language they spoke at home (50 percent versus 32 percent). Finally, 11th and 12th graders were more likely to participate than those in earlier grades (56 percent versus 45-47 percent); some possible explanations for this difference are differences in student maturity based on age (as in Miller 1994), greater mobility, or the need to fulfill a community service requirement before graduating.

It is possible that just as there were differences among students who participated, there might also be differences in how much they participated. One type of student might tend to participate once or twice, while other types might tend to participate more regularly. For example, the additional increment of participants in one group might be based on an increased percentage of students who participated only once or twice, while there were no differences between the groups in the percentage who participated more regularly. However, the general result, as in the overall findings, was that students who participated in community service were split fairly evenly between those who participated

one or two times and those who participated more regularly. The major exceptions were among 11th and 12th graders, who were more likely to participate regularly than to participate once or twice (32 percent versus 24 percent), students who received mostly As (33 percent participated regularly versus 27 percent who participated one or two times), and females (29 percent versus 24 percent). For females and for 11th and 12th graders, it is the relatively large number who participated regularly who are responsible for the overall differences in participation rates, while there were only small differences in the percentage who participated one or two times. Students who received mostly As showed a different pattern; they were more likely than those receiving Ds and Fs not only to participate regularly, but also to participate one or two times.

Alternative Student Activities

Student activities might also play an important role in terms of whether or not a student gets involved in community service. Several different hypotheses on the relationship can be developed regarding the relationship between student activities and participation in community services. On the one hand, involvement in other activities demonstrates self-efficacy and a desire to be involved, so that students who are involved in one activity might also be involved in community service. On the other hand, involvement in alternative activities could also be expected to reduce the amount of time available for community service, so that one type of involvement might compete with the other — especially if the community service occurs regularly.

The data suggest that the first hypothesis is more accurate: students who were involved in alternative activities were more likely to be involved in community service as well (table 3). For example, 42 percent of the students who were involved in student government also said they regularly participated in community service, compared with 22 percent of those not in student government. Similarly, 31 percent of those who were involved in other school activities, and 32 percent of those involved in non-school activities, said they regularly participated in community services, compared to 14-15 percent of other students. Even students who worked for pay, who might be hypothesized to be more needy and/or to be more oriented to satisfying their personal needs, were more likely to say they participated regularly in community service than students who did not work (30 percent versus 21 percent).

No direct measure of hours spent in other activities was collected. However, a sense of the level of commitment to other activities can be developed by looking at the number of different kinds of activities in which students were involved. The greater the number of types of activities that students were involved in, the more likely they were to also report regularly participating in community service; for example, 51 percent of the students who participated in all four of the listed activities also said they

Table 3.—Percent of students in grades 6 through 12 and their reported community service participation, by selected student activities: 1996

Activity	Number of students (thousands)	Participated by time of interview[1]						Will participate before the end of the school year[2]		Will not participate this school year	
		Regular participation		One or two times		Total (any participation)					
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	25,726	26	0.6	23	0.6	49	0.7	31	0.7	20	0.6
Student involved in student government[3]											
Yes	4,247	42	1.6	28	1.6	70	1.6	21	1.3	9	0.9
No	21,479	22	0.6	23	0.7	45	0.8	33	0.8	22	0.6
Student involved in other school activities											
Yes	17,491	31	0.8	26	0.8	57	0.9	28	0.9	15	0.5
No	8,235	14	0.8	17	1.0	32	1.3	38	1.2	30	1.2
Student involved in non-school activities											
Yes	16,201	32	0.7	28	0.8	60	0.8	26	0.8	14	0.5
No	9,526	15	0.8	16	0.9	31	1.1	40	1.3	29	1.2
Student worked for pay											
Yes	12,468	30	0.9	26	1.0	56	1.0	27	0.9	17	0.7
No	13,258	21	0.8	21	0.7	43	1.0	35	1.0	22	0.8
Numbers of types of student activity[4]											
0	2,423	8	1.4	12	1.5	20	1.9	46	2.3	35	2.0
1	6,313	14	1.0	17	1.1	31	1.4	39	1.5	30	1.3
2	8,568	26	1.0	24	1.0	50	1.2	31	1.1	19	1.0
3	6,731	37	1.2	31	1.2	68	1.2	22	1.1	10	0.7
4	1,691	51	2.7	29	2.5	81	2.1	16	1.9	4	0.8

[1] Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2] Only students who had not done community service by the time of the interview were asked this question.

[3] Includes running for office, working on a campaign, or serving in the student government.

[4] Total number of activities in which the student reported that he or she participated, based on the following four categories: student government, other school activities, organized non-school activities, and working for pay either regularly or occasionally.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

participated regularly in community service, compared with 37 percent of those who participated in three of the four activities, and 8 percent of those who participated in none of the four activities.

Family Characteristics

Student behavior is often strongly related to the student's family background. Student community service activity is probably no different since the family environment is likely to affect students' interest in community service and their ability to participate. For instance, one study (Independent Sector 1996b) found that participation was much higher among students who said both parents volunteered than among students who said neither parent volunteered (78 percent versus 47 percent). Parental education and income may affect the resources available to help students participate, including the knowledge of what opportunities might be available, and the transportation or other resources that might be needed. Two-parent families might provide more support for community service than one-parent families, either directly (e.g., two-parent families may have more time and resources for their own participation in community service and in supporting their children), or indirectly (e.g., whether the parental environment affects such student characteristics as self-esteem and self-efficacy, which in turn may affect student participation).

Each of the above family characteristics was associated with whether or not the students participated (or planned to participate) in community service (table 4). Students were more likely to participate if an adult in the household participated in community service (57 percent) than if no adult participated (39 percent). They also were more likely to participate if the highest degree held by a parent in the household was a college degree or higher (58-64 percent) than if no adult had a college degree (34-48 percent), and if the household income was more than $40,000 (53-60 percent) than if it was lower (37-47 percent). Finally, students in two-parent households were more likely to participate than those in one-parent households (52 percent versus 43 percent).

Again, student participants tended to be relatively evenly split between those who participated once or twice and those who participated more regularly. Two exceptions were that students who had an adult in the household who performed community service were more likely to participate regularly than once or twice (32 percent versus 26 percent) as were students who had a parent with a graduate or professional degree (35 percent versus 29 percent).

Table 4.—Percent of students in grades 6 through 12 and their reported participation in community service, by selected household characteristics: 1996

Characteristic	Number of students (thousands)	Participated by time of interview[1]						Will participate before the end of the school year[2]		Will not participate this school year	
		Regular participation		One or two times		Total (any participation)					
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	25,726	26	0.6	23	0.6	49	0.7	31	0.7	20	0.6
Household income											
$10,000 or less	3,262	19	2.1	18	1.9	37	2.4	41	2.5	22	1.9
$10,001 to $20,000	3,374	21	1.6	22	1.8	44	1.7	36	1.6	21	1.6
$20,001 to $30,000	4,112	24	1.6	21	1.7	46	1.7	32	1.8	22	1.6
$30,001 to $40,000	3,755	24	1.3	22	1.5	47	1.6	33	1.5	20	1.4
$40,001 to $50,000	2,837	26	1.3	26	1.8	53	2.0	28	1.5	20	1.5
$50,001 to $75,000	4,378	30	1.4	25	1.3	56	1.5	26	1.4	19	1.1
More than $75,000	4,007	32	1.5	28	1.4	60	1.8	25	1.6	16	1.1
Parents/guardians' highest education											
Less than high school	2,469	15	2.0	18	2.0	34	2.3	44	2.7	23	2.0
High school diploma or equivalent	7,775	22	1.0	20	1.1	42	1.3	36	1.2	22	1.1
Vocational education or some college	7,472	25	1.0	23	1.0	48	1.2	31	1.2	21	1.1
College degree	3,881	29	1.7	29	1.5	58	1.5	26	1.5	16	1.3
Graduate/professional training or degree	4,129	35	1.5	29	1.5	64	1.9	22	1.6	14	1.0
Number of parents/ guardians in the household											
1	7,978	22	1.2	21	1.2	43	1.2	34	1.2	23	1.1
2	17,748	27	0.6	25	0.7	52	0.8	30	0.7	18	0.6
Any adult in the household does community service											
Yes	13,785	32	0.9	26	0.8	57	1.0	28	0.9	14	0.7
No	11,941	19	0.8	21	0.9	39	1.1	34	0.9	26	0.9

[1] Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2] Only students who had not done community service by the time of the interview were asked this question.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

Community Characteristics

Though one would not expect the student to be affected as closely by the community as by the family, the nature of the community also determines the role models offered to students, the resources available, and the opportunities for service. For the most part, the differences among students based on community characteristics were not as strong as those based on personal and family characteristics (table 5). However, just as household income was related to community service, community-based measures of wealth also were related to community service. Students living in ZIP codes where less than 5 percent of the families were below the poverty level in income were more likely to participate than those in ZIP codes where 20 percent or more lived in poverty (54 percent versus 42 percent). Also, students living in ZIP codes where more than 60 percent of the households were owner occupied were more likely to report participating than were students in areas with lower ownership rates (50-51 percent versus 45 percent). Community-based measures of wealth are closely related to household income (e.g., families with high incomes are likely to live in communities with high income), so these findings do not necessarily indicate that the community had an impact that was independent of the household characteristics.

School Characteristics

One focus of this report is on the role that schools play in students' participation in community service. It is therefore helpful to examine general patterns of participation based on school type before looking in more detail at specific school policies that may affect student participation. The school type may be important both because it may be related to the type of policies and opportunities at schools concerning community service, and because to the degree that students and parents are able to select which schools the students attend (i.e., especially among private schools, though students are sometimes able to choose among public schools as well), student and family characteristics and attitudes may be interrelated with school characteristics.

There was a great difference in participation depending on which type of school the student attended (table 6). Students in private schools were more likely than those in public schools to report they participated in community service (66 percent versus 47 percent). This difference was most pronounced when comparing students in church-related schools to public schools (69 percent versus 47

Table 5.—Percent of students in grades 6 through 12 and their reported community service participation, by selected community characteristics: 1996

Characteristic	Number of students (thousands)	Participated by time of interview[1]						Will participate before the end of the school year[2]		Will not participate this school year	
		Regular participation		One or two times		Total (any participation)					
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	25,726	26	0.6	23	0.6	49	0.7	31	0.7	20	0.6
Census region											
Northeast	5,295	26	1.1	21	1.3	47	1.6	32	1.5	22	1.2
South	8,842	25	1.0	24	1.0	49	1.1	33	1.1	19	0.9
Midwest	6,186	26	1.3	25	1.3	51	1.6	29	1.4	20	1.3
West	5,403	26	1.3	24	1.2	50	1.6	31	1.4	19	1.2
Percent of families below poverty in ZIP code[3]											
Less than 5 percent	7,424	29	1.1	25	1.1	54	1.4	28	1.3	19	1.0
5 to 9 percent	7,489	26	1.1	24	1.1	50	1.3	30	1.1	20	1.2
10 to 19 percent	7,250	24	1.1	23	1.1	47	1.2	32	1.4	21	1.1
20 percent or more	3,563	22	1.6	20	1.6	42	1.7	39	1.9	19	1.4
Percent of households in ZIP code owner occupied[3]											
60 percent or less	6,704	23	1.1	22	1.1	45	1.2	35	1.2	20	1.1
61 to 70 percent	6,492	28	1.4	22	1.3	50	1.6	29	1.4	20	1.2
71 percent or more	12,530	26	0.8	25	0.9	51	1.1	30	1.0	19	0.8

[1] Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2] Only students who had not done community service by the time of the interview were asked this question.

[3] These variables are from the NHES:96 Household & Library restricted data file, which can be obtained from NCES under a special licensing agreement.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

percent).[6] Students in church-related private schools also differed from the general pattern by being more likely to have participated regularly (40 percent) than to have participated once or twice (28 percent).

Table 6.—Percent of students in grades 6 through 12 and their reported participation in community service, by selected school characteristics: 1996

Characteristic	Number of students (thousands)	Participated by time of interview[1]						Will participate before the end of the school year[2]		Will not participate this school year	
		Regular participation		One or two times		Total (any participation)					
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
School type											
Public	23,343	24	0.6	23	0.6	47	0.8	32	0.7	21	0.6
Assigned	20,010	24	0.7	23	0.7	47	0.8	32	0.8	21	0.7
Chosen	3,332	28	1.8	22	1.9	50	2.0	32	2.1	18	1.3
Private	2,383	38	2.1	28	2.1	66	2.3	22	2.0	13	1.3
Church-related	1,851	40	2.7	28	2.3	69	2.8	20	2.2	11	1.5
Not church-related	533	29	4.8	28	4.2	57	5.0	26	4.0	17	3.6

1 Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

2 Only students who had not done community service by the time of the interview were asked this question.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

School Practices to Encourage Participation and Learning

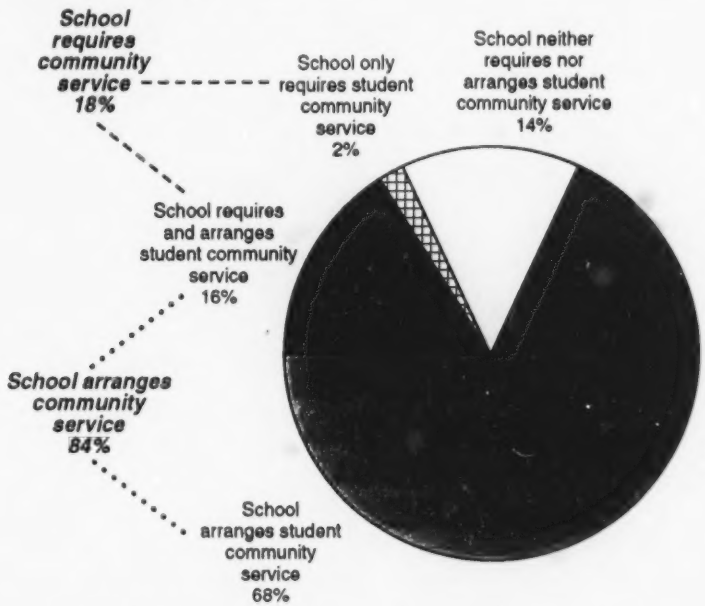
Schools may engage in several activities to encourage students to participate in community service. The most direct action a school may take is to include community service participation as a requirement for graduation; this may be either a policy of an individual school or a rule set by a state for all of its public school students. Schools may also facilitate community service by either arranging or offering service activities, thus making it easier for students to become involved. A survey by Independent Sector (1996a) indicates that 93 percent of teenagers who were asked to volunteer actually did participate, compared with 24 percent of those who were not asked, lending credence to the idea that schools may have substantial influence by simply offering or arranging community service. Still another

[6] These findings are consistent with those reported in Frase (1995). That study was based on data from the NELS:88 database and was limited to high school seniors.

step schools may take is to incorporate community service into the school curriculum (e.g., by talking about it in class, having students write about it, or allowing the activity to contribute to a class grade), thus increasing the visibility and perhaps the perceived value of community service, as well as possibly offering rewards for service.

The great majority of students (84 percent) said their schools arranged student community service, including 16 percent who said their schools not only arranged it but also required it (figure 2). Almost all of the remaining students (14 percent of the total) reported that their schools neither arranged nor required community service. Very few students (2 percent) were in schools that required community service without also arranging it.

Figure 2.—Percent of students in grades 6 through 12 who reported various school practices to promote community service: 1996


School requires community service 18%
School only requires student community service 2%
School neither requires nor arranges student community service 14%
School requires and arranges student community service 16%
School arranges community service 84%
School arranges student community service 68%

NOTE: Standard errors are as follows: school requires community service, 0.6; school arranges community service, 0.5; school only arranges community service, 0.7; school only requires community service, 0.2; school neither requires nor arranges student community service, 0.5; school requires and arranges student community service, 0.5.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

Relationship Between School Policies and Student Participation

Based on the students' description of their schools, the type of policies that schools established appears to be related to student participation. The most important factor appeared to be

BEST COPY AVAILABLE

whether schools arranged or offered community services: 52 to 56 percent of students in such schools said they had participated in community service, compared with 19 to 30 percent of the remaining students (table 7). On the other hand, school policies that required community service did not appear to have as much impact, at least at the time of the survey. The participation rates of students in schools that both arranged and required community service (56 percent) were similar to those in schools that only arranged it (52 percent), while participation at schools that only required service (19 percent) was actually lower than either schools that only arranged it (52 percent) or that neither required nor arranged it (30 percent).

Table 7.—Community service participation of students in grades 6 through 12, by reported school practices to promote student community service: 1996

Community service participation	School requires and arranges community service		School only requires community service		School only arranges community service		School does not require or arrange community service	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Number of students (thousands)	4,242	136	394	53	17,446	177	3,644	124
Community service participation								
Any participation by time of interview[1]	56%	1.9	19%	3.9	52%	0.9	30%	1.7
Regular	30	1.6	9	2.3	27	0.7	15	1.3
1 or 2 times	27	1.6	10	3.5	25	0.8	14	1.2
Will participate later this school year[2]	32	1.8	61	5.1	29	0.8	37	1.6
No participation this school year	11	1.0	20	4.7	19	0.6	34	1.8
Plans to participate next school year								
Yes	87	1.4	76	5.5	81	0.6	70	1.9
No	13	1.4	24	5.5	19	0.6	30	1.9

[1] Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2] Only students who had not done community service by the time of the interview were asked this question.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

BEST COPY AVAILABLE

Among those relatively few students who were at schools that required community service but did not arrange or offer it, the most common response was that students had not participated yet but they planned to later in the year (61 percent). If all of these students ultimately did participate by the end of the year (which was not certain, since the presence of a requirement did not necessarily mean the requirement had to be fulfilled in that year), the overall participation rate for that year would be better than at schools that neither required nor arranged community service (80 percent versus 66 percent), but no better than at schools that arranged service without requiring it (80 percent versus 81 percent).[7]

At least two hypotheses are available to explain how school policies affect students' participation in community service: school policies might compensate for lower motivation to participate among some students (either by forcing students to participate regardless of their motivation, or by making participation easier so that less work or initiative is required to participate), or schools might help students to overcome other barriers to participation (e.g., the student may not know how to get involved, what opportunities are available, and whom to contact). It is possible for both of these hypotheses to be true, but each might tend to support a different kind of school policy: requiring students to participate might seem most directed at compensating for lower motivation, and arranging community service might seem most directed at removing barriers to participation. Based on this logic, the fact that arranging community service appears more important than requiring it provides some evidence that students are willing to participate but that many students need help in order to participate.

Another way to examine this issue is to compare students across schools in terms of the number of hours that students devote to community service. Since schools that arranged community service generally seemed to be successful in getting additional students to participate, one can ask how those students compared to the students who probably would have participated in any case. If the students who were led to participate by the school policies had less motivation than other participants, one might expect them to participate for fewer hours. If so, schools with such policies might have a different distribution from other schools, with more students concentrated at the low end of the scale. In fact, no such pattern appeared, and the patterns of participation were much the same regardless of the school policies (table 8). For example, the percentage of students who participated for 10 or fewer hours ranged from 23 to 27 percent, and the percentage who participated for more than 80 hours ranged only from 19 to 23 percent. Thus, the school policies seemed primarily to work by lessening barriers to participation for students who were otherwise willing to participate, rather than compensating for lower motivation.

---

[7] Standard errors for the combined estimates are as follows: school only requires community service, 4.7; school does not require or arrange community service, 1.8; school only arranges community service, 0.6.

School policies also were related to students' plans for participating in community service in the next year, although the relationship was not as strong as for the same year. Students in schools that both required and arranged community service were more likely to plan to participate in the next year (87 percent) than students in schools that only arranged (without requiring) community service (81 percent), and students at both kinds of schools were more likely to participate than those in schools that neither required nor arranged community service (70 percent).[8]

Table 8.—Hours of regular community service participation in the current school year for students in grades 6 through 12, by reported school practices to promote student community service: 1996

Community service participation	School requires and arranges community service		School only requires community service		School only arranges community service		School does not require or arrange community service	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Number of students (thousands)	1,253	75	34	9	4,755	137	554	47
Hours of community service since the beginning of school[1]								
10 or fewer hours	23%	2.7	(•)	(•)	27%	1.6	25%	3.9
11 to 30 hours	28	3.0	(•)	(•)	27	1.4	30	3.4
31 to 80 hours	26	3.0	(•)	(•)	26	1.5	25	3.9
More than 80 hours	23	2.4	(•)	(•)	20	1.3	19	3.5

[1] This variable was constructed by summing all reported hours of community service activity during the current school year in which a student had participated by the time of the interview. This question was asked only of those who had participated in at least one activity on a regular basis (26 percent of 6th through 12th grade students). Additional information on this measure is provided in the section on survey methodology at the end of this report, under the heading "hours of service measure."

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding. Because of the small number of cases (unweighted n=14), estimates for students in schools that only require community service are not presented but are designated by (•).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

Types of schools promoting community service

All but 14 percent of students said their schools in some way encouraged community service, with only small differences based on each student's grade level and the school type (table 9).

[8] Data are not presented in a table. Standard errors are as follows: planned participation for students in schools that require and arrange community service, 1.4; for students in schools that only arrange community service, 0.6; and for students in schools that neither require nor arrange community service, 1.9.

However, there were large differences in terms of the mechanisms that were used to encourage community service — specifically whether schools only arranged community service or they also required it. Students in private schools were much more likely than those in public schools to be in schools that required and arranged community service (40 percent versus 14 percent), and less likely to be in schools that only arranged community service (49 percent versus 70 percent). This was especially true of students in church-related schools. Also, students in grades 9 through 12 were more likely to be in schools that both required and arranged community service (18-21 percent versus 13 percent), and less likely to be in schools that neither required nor arranged community service (11-12 percent versus 18 percent).

Table 9.—Percent of students in grades 6 through 12 who reported school practices to promote student community service, by student's grade and school type: 1996

Characteristic	Number of students (thousands)	School requires and arranges community service		School only requires community service		School only arranges community service		School does not require or arrange community service	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	25,726	16	0.5	2	0.2	68	0.7	14	0.5
Student's grade*									
6-8	11,535	13	0.7	2	0.3	67	1.0	18	0.8
9-10	7,429	21	1.1	2	0.4	65	1.3	12	0.7
11-12	6,760	18	1.0	1	0.2	71	1.3	11	0.9
School type									
Public	23,343	14	0.5	2	0.2	70	0.7	15	0.5
Assigned	20,010	14	0.6	1	0.2	70	0.8	15	0.5
Chosen	3,332	18	1.5	2	0.4	67	1.8	13	1.3
Private	2,383	40	2.1	2	0.5	49	2.2	10	1.2
Church-related	1,851	42	2.3	2	0.6	46	2.4	10	1.5
Not church-related	533	31	4.0	1	0.5	60	4.3	8	2.1

*One case was coded ungraded, no equivalent. It was not included in this analysis.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

The impact of adults as examples

To get a better picture of the relationship between school practices and student community service, a key family characteristic — the involvement of an adult in the household in community service — was controlled for. Fifty-four percent of students reported that their parents or another adult in the household performed community service. The relationship between student reports of school policies and student participation continued to hold regardless of whether an adult in the household provided a positive example of community service, though the overall levels of participation were somewhat lower if no adult participated. For example, among students who said no adult in the household participated in community service, 43 to 47 percent of students participated in community service if they said their school arranged it, compared with 13 to 20 percent of students in other schools (table 10). Similarly, the relationship between school policies and plans for participating in the next year was maintained when no adults participated (with a greater percentage planning to participate if students said the school both required and arranged community service than if students said the school only arranged it, and a greater percentage in both groups planning to participate than if students said the school neither required nor arranged community service).

The lack of an adult participating in community service seemed to most affect the percentage of students who participated regularly. One example is among students at schools that arranged community service; if the students lived in households with a participating adult, 33 to 37 percent participated regularly, compared with only 20 to 21 percent if no adult participated in community service. By contrast, there was not much difference in the percentage who participated one or two times (e.g., 27 percent versus 22 to 26 percent).

A Multivariate Test of the Relationship Between School Policies and Student Participation

Since a number of student, family, and school characteristics were associated with student participation in community service, it is possible that the apparent association between school policies and student participation might change if these factors are accounted for. For example, if parents who participated in community service tended to live in the same types of communities or choose the same types of schools for their children, then the adoption of school policies promoting participation in community service may be an indicator that students were living in family environments that promoted community service, while the school policies themselves may have had no independent impact. To examine this possibility, a multivariate logistic regression that included student, family, and school characteristics was performed (table 11). This test suggests that school policies did have an independent

Table 10.—Community service participation of students in grades 6 through 12, by participation in community service of adults in the household and by school practices to promote community service: 1996

Characteristic	School requires and arranges community service		School only requires community service		School only arranges community service		School does not require nor arrange community service	
	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.	Estimate	s.e.
Number of students (thousands)	4,242	136	394	53	17,446	177	3,644	124
No adult participated in community service								
Number of students (thousands)	1,932	83	225	39	8,032	151	1,752	93
Student community service participation								
Any participation by time of interview[1]	47%	3.1	13%	4.7	43%	1.3	20%	2.0
Regular	21	2.0	6	2.6	20	1.0	10	1.6
1 or 2 times	26	2.5	8	4.6	22	1.1	10	1.4
Will participate later this school year[2]	37	2.9	59	8.5	33	1.2	34	2.5
No participation this school year	16	1.9	28	7.8	24	1.0	46	3.0
Student plans to participate next school year								
Yes	82	2.6	70	8.2	75	1.1	59	3.1
No	18	2.6	30	8.2	25	1.1	41	3.1
Adult participated in community service								
Number of students (thousands)	2,310	108	170	34	9,414	187	1,892	90
Student community service participation								
Any participation by time of interview[1]	64	2.4	26	6.1	60	1.3	39	2.3
Regular	37	2.3	13	4.4	33	1.1	20	1.9
1 or 2 times	27	1.9	14	5.7	27	1.0	18	1.9
Will participate later this school year[2]	29	2.1	64	6.8	26	1.1	39	2.7
No participation this school year	7	1.1	10	4.8	14	0.8	22	2.1
Student plans to participate next school year								
Yes	91	1.2	83	7.1	87	0.9	80	2.2
No	9	1.2	17	7.1	13	0.9	20	2.2

[1]Data were collected from January 2, 1996, through April 13, 1996. Any student who reported participating in at least one activity more than twice is classified as a regular participant. Students may have participated in multiple activities without being classified as regular participants if no individual activity was performed regularly.

[2]Only students who had not done community service by the time of the interview were asked this question.

NOTE: s.e. is standard error. Numbers may not add to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

Table 11.—Logistic regression analysis to predict student participation in community service

	Coefficient[1]	Standard error	P-value	Odds ratio[2]
Intercept	-3.17**	0.157	0.0000	0.04**
Student characteristics				
Female	0.13*	0.053	0.0128	1.14*
English spoken most at home by student	0.45**	0.130	0.0009	1.57**
Number of types of student activities	0.60**	0.037	0.0000	1.82**
Student in grades 11 or 12	0.21**	0.066	0.0025	1.23**
Student received mostly As	0.51**	0.078	0.0000	1.67**
Student received mostly Bs	0.20*	0.078	0.0113	1.22*
Family characteristics				
Adult performed community service	0.32**	0.066	0.0000	1.38**
Parent/guardian had college degree or higher	0.25**	0.064	0.0002	1.28**
School characteristics				
Church-related school	0.58**	0.137	0.0000	1.79**
Other private school	0.13	0.228	0.5715	1.14
School policies				
School required service	0.10	0.091	0.2650	1.11
School arranged service	1.00**	0.083	0.0000	2.72**

*p<.05. **p<.01.

[1]Each category is expressed relative to an omitted category for the variable, controlling for all other variables in the model. The applicable coefficients can be summed to estimate the probability that students with certain characteristics will participate in community service. For example, for a female student who spoke English the most at home, who participated in three other types of activities, who received mostly As, who had an adult in the household who performed community service, and who fit none of these other criteria, the sum is -3.17 + .13 + .45 +3(.60) + .51 + .32 = .04. Based on these characteristics, the probability of participation is $1/(1 + e^{-.04}) = .51$, or 51 percent.

[2]The odds ratio can be used to estimate the change in probability of a student participating in community service. An odds ratio greater than 1 indicates that students in the indicated group were more likely to perform community service than the omitted group. More specifically, suppose a student would ordinarily have a probability of participating of 51 percent, but that student is in a school that arranges service. The student's original probability can be expressed as an odds [51/(100-51) = 51/49 = 1.04]. The odds ratio of 2.72 for schools that arrange service can be multiplied by the original odds (2.72 times 1.04 = 2.83) to estimate the revised odds that the student would participate, based on the school's policy. To express the revised odds as a probability, one can apply the formula: probability = (odds)/ (1 + odds) = 2.83/3.83 = .74. Thus, by being in a school that arranges services, the student's probability of participating would increase from 51 percent to 74 percent. The amount of the increase that is associated with the school policy varies from one student to another depending on the student's original probability of participating.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

BEST COPY AVAILABLE

and positive effect on student participation rates, even after statistically adjusting for these other factors. Students who were in schools that arranged community services had a higher probability of participation in community service, while students who were in schools that required community service did not show a statistically significant difference in their participation from other students.[9]

Incorporating Community Service into the Curriculum

A common goal of encouraging community service through school policies is to turn it into a learning experience by providing a chance within the student's curriculum to reflect about the experience — also called service-learning. A majority (56 percent) of students who participated in community service reported that their schools in some way used service-learning methods by incorporating their community service into the curriculum (table 12). Nearly half (45 percent) of those students who participated in community service said they had a chance to talk about their service experience in class or in a group session with other students. Further, 23 percent said their service activity contributed to a class grade, and 17 percent said they were required to write about a service activity in a journal or essay. An estimated 7 percent said the service activity was incorporated in all three ways.

[9] Some measures that were related to participation when bivariate tests were performed did not show statistically significant results in the logistic regression and were dropped from the model: these were percentage of households in the respondent's ZIP code that were below poverty level and percentage of households that were owner occupied, household income, race, and the number of parents in the household. This does not mean that these factors had no impact on participation, but only that no statistically significant independent effect could be identified. The basic findings did not change when these variables were included, or when alternative forms of the model were also examined (see table 13 for the full logistic regression model). The impact of arranging community service continued to be statistically significant while the impact of requiring community service continued not to be significant if information about school type was removed from the regression, if a separate term was included to measure schools that both required community service and arranged or offered it, and if both actions were taken (i.e., excluding school type and including a separate term for schools that both required and arranged service). Statistical significance depends in part on the number of cases, and a lack of statistical significance does not necessarily mean that the policy had no impact. However, since the magnitude of the coefficient was also small compared to that for arranging community service, it appears that the policy of arranging community service had the greatest impact.

BEST COPY AVAILABLE

Table 12.—Percent of students in grades 6 through 12 participating in community service who reported incorporation of community service in the curriculum, by school practices to promote student community service: 1996

Characteristic	Number of students participating in community service (thousands)*	Talked about service activity in class		Required to write about service activity		Service activity contributed to a class grade		Service activity was incorporated in at least one way		Service activity was incorporated in all three ways	
		Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.	Percent	s.e.
Total	12,627	45	0.9	17	0.7	23	0.8	56	0.9	7	0.6
School practice											
Requires and arranges service	2,389	50	2.3	32	2.2	35	2.3	67	2.3	14	1.8
Requires service only	74	32	11.6	40	13.8	44	13.0	57	11.3	17	11.3
Arranges service only	9,087	47	1.2	14	0.8	22	1.0	56	1.2	6	0.6
Neither requires nor arranges service	1,076	21	2.6	9	1.8	6	1.4	27	2.8	3	1.2

*Numbers may not add to totals because of rounding.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

The incorporation of community service into the curriculum varied depending on other school practices concerning community service. The three strategies that were examined in the questionnaire differed in the degree to which an action was imposed on the student (i.e., the questionnaire did not ask students if they were required to talk about their experience, but only if they had a chance to, while the other two activities were more directive), and the degree to which the student could initiate the activity at his/her own initiative (i.e., a student might have a chance to talk about the experience in class sessions that were not specifically directed towards community service). Thus, it is not surprising that a different pattern appeared for talking about the service activity than for writing about it or incorporating it into a grade. Students were most likely to talk about the service activity in class if their school arranged community service (47-50 percent versus 21-32 percent), regardless of whether the schools required community service. They also were more likely to talk about the service activity than to write about it or have it count toward a grade in a class if the school neither required nor arranged community service, possibly suggesting that some of the students may have been initiating the discussion of community service rather than there being an intentional strategy on the part of the school to introduce a discussion of community service into the curriculum. For the other two activities, however, students were more likely to report school involvement if the schools required service: 32 to

40 percent were required to write about the service activity if service was required (versus 9-14 percent), and 35 to 44 percent said the activity contributed to a class grade (versus 6-22 percent).[10] It may be that teachers were reluctant or less able to take these more compulsory actions unless they could be sure that students had participated in community service, so that these approaches were more common when community service was specifically required.

Looking at all three curriculum strategies together, students were more likely to report that at least one of the strategies was used if they were in schools that both required and arranged service than if the school only arranged service (67 percent versus 56 percent) or neither arranged nor required service (67 percent versus 27 percent). Finally, students were more likely to have the service activity incorporated into the curriculum in all three ways if they were at schools that required service (14-17 percent versus 3-6 percent).

[10] A qualification that should be added is that the number of students in schools that required community service but did not arrange it was so small that this group might be combined with any of the other three groups without much impact. The important point is that these two methods of incorporating the service activity into the curriculum were more common when students were in schools that both required and arranged community service than when the schools did not require community service.

Summary and Conclusions

The NHES:96 data indicate that many students are involved in community service. About half of students in 6th through 12th grade reported they participated in some type of service activity during the 1995-96 school year prior to the time they were interviewed. Overall, 23 percent said they participated once or twice in each of up to three activities that they described, and 26 percent said they participated more regularly in at least one activity. Among those who had participated more regularly, 12 percent participated for more than 30 hours, and 19 percent for more than 10 hours. Generally, almost all (91 percent) of those who had participated in 1995-96 also expected to participate in 1996-97, while about half of those who said they would not participate in 1995-96 also said they expected to participate in 1996-97.

While many students were involved, not all kinds of students were involved equally. Those who were more likely to participate were students who received high grades, females, students for whom English was the primary language they spoke at home, and 11th and 12th graders. By contrast, students who received lower grades, males, and 6th through 10th graders were less likely to participate. The greater the number of types of activities students were involved in (i.e., student government, other school activities, non-school activities, or work for pay), the more likely they were to participate in community service. Students who attended private schools, especially church-related schools, were also more likely to have done community service.

In addition to the student and school characteristics that were related to participation, some family characteristics also were related. Students were more likely to participate if an adult in the household participated in community service and if the highest degree held by a parent was a college degree or higher.

Several variables associated with community service participation in bivariate analyses did not show a relationship once other factors were adjusted for. For instance, the results of a bivariate analysis supported other studies' conclusions that white students are more likely to participate than students from other racial and ethnic groups. However, race/ethnicity as well as household income, number of parents in the household, percent of households in the ZIP code that were owner occupied, and percent of families below the poverty line in the ZIP code did not reach significance in the logistic regression. Rather, the effect of these variables on participation in community service that was noted in the bivariate analyses was accounted for in the multivariate model by other variables such as student's gender, parents' educational achievement, and school policies.

The great majority of students (86 percent) were in schools that in some way encouraged community service, and these policies were related to student participation in community service. The most important factor was whether schools arranged community service; whether schools actually required participation in community service did not have an independent effect. It may be that the measured effect of requiring participation would have been greater if this study had been limited to 12th graders (the group most directly facing the need to participate in order to graduate) and if it had been conducted later in the year (since some students might not yet have acted on the requirement), but the large effect of simply arranging community service is noteworthy in any case. It continued to appear even after performing multivariate analyses to adjust for the effect of other factors known to be related to student participation in community service. Private schools, and especially church-related private schools, differed from public schools in the way they sought to encourage community service; students in private schools were somewhat evenly divided among those in schools that both required and arranged community service and schools that only arranged community service, while public schools students tended to be in schools that only arranged community service.

Many students also reported that their schools incorporated their community service into the curriculum by talking about it in class, by writing about it, or by incorporating it in their grades; the most common of these was talking about it in class. Students who were in schools that both required and arranged community service were more likely to say that their community service had been incorporated into the curriculum than students in schools that only arranged community service; thus, whatever the effect of requiring community service on student participation rates, school policies on requiring community service did have important implications for the curriculum.

Because this survey was cross-sectional rather than following students over time, it does not provide data on the effects of community service. A future topic for research might be to examine whether changes such as improved grades or altered attitudes might differ depending on what methods are used to encourage community service or depending upon what type of service is performed. How effective school sponsored community service activities are in preparing students for the work place is also an important question that needs to be addressed. Another potential topic for future research would be to further examine the relationship between parents as role models and the service activities of their children; for example, if schools encouraged greater participation by parents in school activities, a side effect might be to provide a role model that also results in greater participation in community service by students.

Survey Methodology and Data Reliability

The 1996 National Household Education Survey (NHES:96) is a telephone survey conducted by Westat for the U.S. Department of Education, National Center for Education Statistics (NCES). Data collection took place from January through April of 1996. When appropriately weighted, the sample is nationally representative of all civilian, noninstitutionalized persons in the 50 states and the District of Columbia. The sample was selected using random-digit-dialing (RDD) methods, and the data were collected using computer-assisted telephone interviewing (CATI) technology. See Vaden-Kiernan et al. (forthcoming) for more information.

The Youth Civic Involvement (CI) component of the NHES:96, which is the primary basis of this report, employed a sample of students in grades 6 through 12. Up to three instruments were used to collect information on the school and family experiences of these students. A set of screening items (Screener), administered to a member of the household age 18 or older, was used to determine whether any children of the appropriate ages or grades lived in the household, to collect information on each household member, and to identify the appropriate parent/guardian respondent for the sampled child. For sampling purposes, children residing in the household were grouped into younger children (age 3 through grade 5) and older children (grades 6 through 12). If one child age 3 to 5th grade resided in the household, an interview was conducted about that child; if there were multiple children in this range, one child was sampled with equal probability. Similarly, if one child in 6th through 12th grade resided in the household, an interview was conducted about that child; if there were multiple children in this range, one child was sampled with equal probability. Up to two children could have been selected from a household, one in the lower age/grade range and one in the higher grade range.

For households with youth in 6th through 12th grade who were sampled for the survey, a Parent and Family Involvement in Education/Civic Involvement (PFI/CI) interview was conducted with the parent/guardian most knowledgeable about the care and education of the youth, usually the child's mother. Following completion of that interview and receipt of parental permission, a Youth CI interview was conducted with the student. This report was based on the responses of these students, and with few exceptions all variables used in the report are on the Youth CI public data file. The analysis includes one item taken from the Parent PFI/CI data file: the student's academic performance. Two variables were created from the 1990 Decennial Census (STF 3B data file) by matching the respondent's ZIP code to the census data. These items are the percentage of households below poverty and the percentage of households that are owner occupied. These variables are contained in the NHES:96 Household & Library restricted data file, which can be obtained from NCES under a special licensing agreement.

More information about the adult, parent, and youth data can be found in the *National Household Education Survey of 1996, Data File User's Manual, Volumes I-V* (Collins et al. forthcoming).

Response Rates

For the NHES:96 survey, Screeners were completed with 55,708 households. A sample of 23,835 children age 3 through 12th grade was selected for a Parent PFI/CI interview. This sample included 10,949 youth in grades 6 through 12. The response rate for the Screener was 70 percent. The completion rate for the Parent PFI/CI interview, or the percentage of eligible sampled children for whom interviews were completed, was 89 percent, or 20,792 interviews. Thus, the overall response rate for the Parent PFI/CI interview was 63 percent (the product of the Screener response rate and the Parent PFI/CI completion rate). An interview with a sampled youth was attempted only after the interview with his or her parent had been completed. The completion rate for youth in grades 6 through 12 was 76 percent. Thus, the overall response rate for the Youth CI interview was 53 percent (the product of the Screener completion rate and the Youth CI interview completion rate). For more information about response rates, see Montaquila and Brick (forthcoming). This report is based on a subset of the total population of youth, students enrolled in schools in the 6th through 12th grade. The unweighted number of cases included in this analysis is 7,940.

For the NHES:96, item nonresponse (the failure to complete some items in an otherwise completed interview) was very low. Most items in used in this analysis have response rates of 98 percent or more as shown in exhibit 1. Items in this report that had a response rate of less than 98 percent are number of weeks and number of hours per week the student performs community service, whether the school arranges and/or requires student community service, whether the student will participate in community service later this year or next year, whether the student participated in student government, and household income. Through a procedure known as "hot-deck" imputation (Kalton and Kasprzyk 1986), responses were imputed for missing values (i.e., "don't know" or "refused," for items not specifically designated to have those as legitimate response categories, or "not ascertained"). As a result, no missing values remain.

Data Reliability

Estimates produced using data from the NHES:96 are subject to two types of error, nonsampling and sampling errors. Sampling errors occur because the data are collected from a sample rather than a census of the population. Nonsampling errors are errors made in the collection and processing of data.

Exhibit 1.—Item response rates for variables used in the analysis

Variable	Label	Number eligible	Item response rate
SEX	S6-GENDER AT SCREENER	8,043	99.98%
RACE	SX21-RACE	8,043	99.52%
HISPAN	SX22-HISPANIC	8,043	99.45%
HOWNHOME	SX27-OWN, RENT HOME/OTHR ARRNGMNT	8,043	99.88%
HINCMRNG	SX33- TOTAL HH INCOME RANGE	8,043	94.89%
HINCOME	SX33- TOTAL HH INCOME RANGE 2	8,043	91.35%
CSPEAK	PA3-LANG CHLD SPEAKS MOST AT HOME	20,792	100.00%
GRADE	PB4-GRADE/YR CHLD IS ATTENDING	19,135	100.00%
SPUBLIC	PD1-CHLD ATTNDS PUBL/PRIV SCH	19,343	99.86%
SCHOICE	PD3-SCH ASSIGNED OR CHOSEN	7,130	99.99%
SEGRADES	PE3-CHLD'S GRADES ACROSS ALL SUBJECTS	16,151	99.00%
MOMGRADE	PL3-HIGHEST GRADE MOM COMPLETED	20,026	99.29%
DADGRADE	PM3-HIGHEST GRADE DAD COMPLETED	15,825	98.75%
PRREPGOV	YB2-SERVED/WORKED IN STUDENT GOVT	6,494	91.98%
PRSCHACT	YB3-PARTICIPATED IN SCH ACTIVITIES	7,940	99.87%
PRGRPACT	YB4-PARTICIPATED OUT-OF-SCH ACTIVITIES	8,043	99.93%
PRWORK	YB5-WORKS FOR PAY	8,043	99.91%
SACTY	YC1-DOES COMMTY SERVICE ACTY	8,043	99.69%
SAREG1	YC4-SERVICE ACTIVITY #1 SCHEDULE	3,996	99.60%
SAWKS1	YC5-FREQ OF SERVICE ACTIVITY #1	1,717	96.85%
SAWKSNU1	YC5OV-NUM WKS FOR SERV ACTY #1	1,162	96.21%
SAHRS1	YC6-HRS/WK FOR SERV ACTY #1	1,717	97.32%
SAHRSNU1	YC6OV-NUM HRS/WK FOR SERV ACTY #1	1,691	96.69%
SAREG2	YC4-SERVICE ACTIVITY #2 SCHEDULE	1,557	99.17%
SAWKS2	YC5-FREQ OF SERVICE ACTIVITY #2	623	97.75%
SAWKSNU2	YC5OV-NUM WKS FOR SERV ACTY #2	434	97.70%
SAHRS2	YC6-HRS/WK FOR SERV ACTY #2	623	98.56%
SAHRSNU2	YC6OV-NUM HRS/WK FOR SERV ACTY #2	606	98.02%
SAREG3	YC4-SERVICE ACTIVITY #3 SCHEDULE	458	99.13%
SAWKS3	YC5-FREQ OF SERVICE ACTIVITY #3	217	95.85%
SAWKSNU3	YC5OV-NUM WKS FOR SERV ACTY #3	140	97.14%
SAHRS3	YC6-HRS/WK FOR SERV ACTY #3	217	96.77%
SAHRSNU3	YC6OV-NUM HRS/WK FOR SERV ACTY #3	211	95.73%
SAARRSER	YC8-SCH ARRANGES SERV ACTIVITIES	7,940	93.61%
SAREQSER	YC9-SCH REQUIRES SERV ACTY	7,940	92.49%
SATALK	YC11-TALK IN CLASS/GRP ABT SERV ACTY	3,956	99.32%
SAJOURNAL	YC12-REQUIRED TO WRITE ABT SERV ACTY	3,956	99.54%
SAGRADE	YC13-ACTIVITY FOR A GRADE IN CLASS	3,956	99.04%
SASCHLYR	YC14-WILL DO SERV ACTY LATER THIS SCH YR	4,047	85.37%
SANEXTYR	YC15-WILL DO SERV ACTY NEXT YR	8,043	87.87%
SASERVC	YC17-FAM PARTICIPATES COMMTY SERV	8,043	98.45%

NOTE: The following variables were also used in the report analyses: CENREG, ZIP18POV, and ZIPOWNED. These were not questionnaire variables but rather variables derived from respondents' telephone area codes or ZIP codes.

Weighting and sampling errors

All of the estimates in the report are based on weighting the observations using the probabilities of selection of the respondents and other adjustments to partially account for nonresponse and coverage bias. These weights were developed to make the estimates unbiased and consistent with estimates of the national totals. There is a potential for bias in the estimates due to the high nonresponse in this survey. Analyses of response rates for different classifications of the sampled youth also demonstrated differential response rates according to the age and grade of child. To reduce potential nonresponse bias, grade was used in the construction of weighting classes for nonresponse adjustment. For more information about adjustment for non-response, see Montaquila and Brick (forthcoming).

The sample of telephone households selected for the NHES:96 is just one of many possible samples that could have been selected. Therefore, estimates produced from the NHES:96 sample may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of households with telephones, rather than all households with telephones.

The standard error is a measure of the variability due to sampling when estimating a statistic. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a complete census count would differ from the sample estimate by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent, and that the difference would be less than 1.96 standard errors, about 95 percent.

In addition to properly weighting the responses, special procedures for estimating the statistical significance of the estimates were employed because the data were collected using a complex sample design. Complex sample designs, like that used in the NHES, result in data that violate some of the assumptions that are normally required to assess the statistical significance of the results. Frequently, the sampling errors of the estimates from the survey are larger than would be expected if the sample was a simple random sample and the observations were independent and identically distributed random variables.

Replication methods of variance estimation were used to reflect the actual sample design used in the NHES:96. A form of the "jackknife" replication method (Wolter 1985) was used to compute the standard errors for estimates presented in this report. The jackknife methods were used to estimate the precision of the estimates of the reported national totals, percentages, and regression parameters. The idea behind replication methods is to form subsamples, or replicates, and then calculate the estimate of interest from the full sample as well as each replicate. The variation among the replicate estimates is

used to estimate the variance for the full sample. To form the replicates for the jackknife method used in this analysis, 80 subsets of telephone numbers were identified. These subsets were constructed to be approximately equal in size, with each subset resembling the full sample. Replicates were formed by deleting one subset at a time and adjusting the weights of units (households or persons) in the other subsets accordingly.

Standard errors for all of the estimates are presented. These standard errors can be used to produce confidence intervals. For example, an estimated 26 percent of students reported regular participation in a service activity. This figure has an estimated standard error of 0.6. Therefore, a 95 percent confidence interval for the percentage of students reporting regular participation in a service activity is approximately 25 to 27 percent.

To test the differences between two categories (e.g., 6th through 8th graders versus 9th and 10th graders), Student's *t* statistic was employed, using unbiased estimates of sampling errors derived by the replication methods mentioned above. As the number of comparisons at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance, that is, it will be erroneously identified as different from zero. Even when there is no statistical difference between the means or percentages being compared, there is a 5 percent chance of getting a significant F or *t* value due to sampling error alone. As the number of comparisons increases, the chance of making this type of error also increases.

A Bonferroni adjustment was used to correct significance tests for multiple comparisons. This method adjusts the significance level for the total number of comparisons made with a particular classification variable. All the differences cited in this report are significant at the 0.05 level of significance after a Bonferroni adjustment.

Nonsampling errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation. As explained above, weighting procedures help to reduce potential bias due to nonresponse.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. In the NHES:96, efforts were made to prevent such errors from occurring

and to compensate for them where possible. For instance, during the survey design phase, focus groups and cognitive laboratory interviews were conducted for the purpose of assessing respondent knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. The design phase also entailed CATI instrument testing and an extensive, multi-cycle field test in which about 3,200 Screeners, over 950 parent interviews, about 300 youth interviews, and about 40 adult interviews were conducted.

An important nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 93.3 percent of all students in grades 1 through 12 live in households with telephones. Estimation procedures were used to help reduce the bias in the estimates associated with youth who do not live in telephone households. Cross-classifications of race/ethnicity by household income, census region by urbanicity, and home tenure by child's grade were used for forming cells for raking. For more information about coverage issues and estimation procedures, see Brick and Burke (1992) and Montaquila and Brick (forthcoming).

Hours of Service Measure

The measure presented in this report for the number of hours of community service in which a student had participated was developed by combining information about the number of weeks and the number of hours per week that students reported spending in each of up to three service activities. First, the number of weeks that the student had participated in each activity was calculated. The exact number of weeks was used in the calculation if it was reported. For students who reported participating since the beginning of the school year, the number of days from September 1, 1995, to the date of the interview was calculated and divided by 7 to obtain the number of weeks. Some students (fewer than 3 percent for any service activity) responded in some other way (for example, "three times a month"). For service activity one, these cases were assigned the modal value for service activity one; that is, they were given the most frequently reported number of weeks for the first service activity named by students. The same procedure was used to assign the number of weeks for service activity two and service activity three.

Second, the number of hours for each service activity was calculated. If a specific number of hours had been reported, that number was used. For the few students who gave another response (e.g., "the hours change from week to week"), the modal value for number of hours for the appropriate service activity (first, second, or third) was assigned. Modal values were assigned to less than 3 percent of students in any given activity.

Third, the total number of hours of service in the current school year was calculated. The number of hours per week was multiplied by the number of weeks for each service activity. The total

number of hours of community service for each student was calculated by summing the hours for each of the three possible service activities.

Students' Expectations of Serving Later in the School Year

To examine whether or not students actually met their expectations to do community service later in the school year, students' responses were grouped according to which month they responded to the survey. If students were fulfilling their plans of getting involved in community service, one would expect that the percentage saying they planned to participate would decrease as time progressed, both because students at later times would have had more opportunities to participate, and because there would be less chance to still participate later in the school year. The actual change was fairly small. Among students who responded over the period January 2 through February 2, 33 percent said they had not yet participated but would participate later in the school year, while among students in the last 6 weeks of data collection (March 3 through April 13), 30 percent said they would participate later. Further, the insignificant decline in the percentage who said they would participate later was not matched by an increase in the number who had participated, but rather in the percentage who said they had no plans to participate in community service during the school year. There is thus some reason for thinking that many of the students who said they planned to participate still would not have participated in community service by the time the school year was completed.[11]

Multivariate Analysis

To design the multivariate analysis presented in table 11, all variables that were statistically significant in the bivariate analyses were included in a logistic regression. Several variables, however, were no longer significant when a multivariate model was applied (e.g., number of parents in the household). Such variables could still be important (e.g., significance depends in part on the number of cases available for analysis). To provide a clearer picture of the significant variables, most of the variables that were not significant in the full model were dropped from the analysis. The important exception was the school service requirement variable. This variable was kept in the model because one of the main purposes of the analysis was to study whether or not arranging service and requiring service

---

[11] Students' expectations of serving later in the school year might have greater accuracy in at least one situation. The survey focuses on 6th through 12th graders, but in the case of those 12th graders who were required to participate in community service in order to graduate, the graduation requirements may help to ensure that the expectations were met (though the students could have satisfied the requirement in an earlier year). To examine this possibility, the responses of 12th graders were looked at separately. The data indicate that 12th grade students who attended schools in which students were required to participate in community service tended to have already participated in community service earlier in the school year; only a small group of all of the students who said they expected to participate later actually met the conditions of also being 12th graders who were required to participate. Further, the same pattern appeared for these students as for students overall, with students who responded later in the school year not showing increased rates of participation, but rather showing small (but not statistically significant) increases in the rate of nonparticipation.

BEST COPY AVAILABLE

each had significant effects. For completeness, table 13 presents the full model before variables were excluded. It demonstrates that the inclusion or exclusion of these extra variables did not have an important effect on the estimates.

Table 13.—Logistic regression analysis to predict student participation in community service (full model, including variables that were not statistically significant)

	Coefficient[1]	Standard error	P-value	Odds ratio[2]
Intercept	-3.12**	0.180	0.000	0.04**
Student characteristics				
Female	0.14*	0.052	0.010	1.15*
English spoken most at home by student	0.39**	0.127	0.003	1.48**
Number of types of student activities	0.60**	0.037	0.000	1.82**
Student in grades 11 or 12	0.21**	0.066	0.002	1.23**
Student received mostly As	0.50**	0.079	0.000	1.65**
Student received mostly Bs	0.20*	0.079	0.013	1.22*
White	0.08	0.082	0.356	1.08
Family characteristics				
Adult performed community service	0.32**	0.066	0.000	1.38**
Parent/guardian had college degree or higher	0.25**	0.073	0.001	1.28**
High-income household	0.01	0.075	0.882	1.01
Number of parents in household	-0.02	0.068	0.730	0.98
School characteristics				
Church-related school	0.58**	0.136	0.000	1.79**
Other private school	0.13	0.230	0.586	1.14
School policies				
School required service	-0.39	0.302	0.206	0.68
School arranged service	0.95**	0.093	0.000	2.59**
School both required and arranged service	0.55	0.318	0.090	1.73
Community characteristics				
Percent of households in ZIP code owner occupied				
60 percent or less	-0.04	0.076	0.615	0.96
61 to 70 percent	0.05	0.094	0.570	1.05
Percent of families below poverty in ZIP code				
Less than 5 percent	-0.09	0.117	0.427	0.91
5 to 9 percent	0.03	0.128	0.798	1.03
10 to 19 percent	0.01	0.109	0.930	1.01

*p<.05. **p<.01.

[1]These coefficients differ slightly from those in table 11 because a different model is being used. Each category is expressed in relation to an omitted category for the variable, controlling for all other variables in the model. The applicable coefficients can be summed to estimate the probability that students with certain characteristics will participate in community service. For example, for a male student who spoke English the most at home, who participated in four other types of activities, who received mostly Bs, who had an adult in the household who performed community service, who attended a church-related private school, and who fit none of the other criteria, the sum is -3.12 + .39 +4(.60) + .20 + .32 + .58 = .77. Based on these characteristics, the probability of participation is $1/(1 + e^{-.77}) = .68$, or 68 percent.

[2]The odds ratio can be used to estimate the change in probability of a student participating in community service. An odds ratio greater than one indicates that students in the indicated group were more likely to perform community service than the omitted group. More specifically, suppose a student would ordinarily have a probability of participating of 68 percent, but that student is in a school that arranges service. The student's original probability can be expressed as an odds [68/(100-68) = 68/32 = 2.125]. The odds ratio of 2.59 for schools that arrange service can be multiplied by the original odds (2.59 times 2.125 = 5.50) to estimate the revised odds that the student would participate, based on the school's policy. To express the revised odds as a probability, one can apply the formula: probability = (odds)/ (1 + odds) = 5.50/6.50 = .85. Thus, by being in a school that arranges services, the student's probability of participating would increase from 68 percent to 85 percent. The amount of the increase that is associated with the school policy varies from one student to another depending on the student's original probability of participating.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996, Youth Civic Involvement component.

References

Alliance for Service-Learning in Education Reform. 1993. *Standards of Quality for School-based Service-learning.* Unpublished paper.

Barber, B. 1992. *An Aristocracy for Everyone.* New York: Ballantine Books.

Batchelder, T., and Root, S. 1994. "Effects of an Undergraduate Program to Integrate Academic Learning and Service: Cognitive, Prosocial Cognitive, and Identity Outcomes." *Journal of Adolescence*, 17, 341-355.

Boyer, E. 1983. *High School: A Report on Secondary Education in America.* New York: Harper and Row.

Brick, J.M., and Burke, J. 1992. *Telephone Coverage Bias of 14- to 21-year-olds and 3- to 5-year-olds.* NCES 92-101. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Calabrese, R., and Schumer, H. 1986. "The Effects of Service Activities on Adolescent Alienation." *Adolescence,* 21, 675-687.

Cairn, R., and Kielsmeier, J. 1991. *Growing Hope.* St. Paul, MN: National Youth Leadership Council..

Collins, M., Brick, J.M., Nolin, M.J., and Gilmore, S. Forthcoming. *National Household Education Survey of 1996 Data File User's Manual, Volumes I-V.* Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Commission on National and Community Service. 1993. *What You Can Do For Your Country.* Washington, DC: U.S. Government Printing Office.

Conrad, D., and Hedin, D. 1982. "The Impact of Experimental Education on Adolescent Development." *Child and Youth Services*, 4, 57-76.

Conrad, D., and Hedin, D. 1991. "School-based Community Service: What We Know From Research and Theory." *Phi Delta Kappan*, 72, 743-749.

Frase, M. 1995. *Community Service Performed by High School Seniors.* NCES 95-743. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Giles, D. Jr., and Eyler, J. 1994. "The Impact of a College Community Service Laboratory on Students' Personal, Social, and Cognitive Outcomes." *Journal of Adolescence*, 17, 327-339.

Goldsmith, S. 1995. "The Community Is Their Textbook: Maryland's Experiment with Mandatory Service for Students." *The American Prospect*, 22, 51-57.

Gomez, B. 1996. "Service-Learning and School-to-Work Strategies for Revitalizing Urban Education and Communities." *Education and Urban Society*, 28, 160-166.

Hamilton, S.L., and Fenzel, L.M. 1988. "The Impact of Volunteer Experience on Adolescent Social Development: Evidence of Program Effects." *Journal of Adolescent Research*, 3, 65-80.

Honnet, E., and Paulson, S. 1989. *Principles of Good Practice for Combining Service and Learning:* Wingspread Special Report. Racine, WI: Johnson Foundation.

Independent Sector. 1992. *Volunteering and Giving Among American Teenagers, 1992.* Washington, DC: Author.

Independent Sector. 1996a. *Teen Volunteering and Giving Increases According to New Independent Sector Survey.* Author.

Independent Sector. 1996b. *Volunteering and Giving Among American Teenagers 12 to 17 Years of Age.* Washington, DC: Author.

Kalton, G., and Kasprzyk, D. 1986. "The Treatment of Missing Data." *Survey Methodology*, 12, 1-16.

Kraft, R. 1996. "Service Learning: An Introduction to Its Theory, Practice, and Effects." *Education and Urban Society*, 28, 131-159.

Miller, F. 1994. "Gender Differences in Adolescents' Attitudes Toward Mandatory Community Service." *Journal of Adolescence*, 17, 381-393.

Montaquila, J., and Brick, J.M. Forthcoming. *Unit and Item Response, Weighting, and Imputation Procedures in the 1996 National Household Education Survey.* NCES Working Paper. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Newman, F.M., Markes, H.M., and Gamoran, A. 1995. *Authentic Pedagogy and Student Performance.* Madison, WI: Wisconsin Center for Education Research.

Scales, P., and Blyth, D. 1997. "Effects of Service-Learning on Youth: What We Know and What We Need to Know." *Generator*, 17, 1, 6-8.

"Short Sentence." 1992. *The Economist*, 8 August, p. 24.

Shumer, R. 1994. "Community Based Learning: Humanizing Education." *Journal of Adolescence*, 17, 357-367.

Vaden-Kiernan, N., Nicchitta, P.G., Montaquila, J., and Collins, M.A. Forthcoming. *Design, Data Collection, Interview Administration Time, and Data Editing in the 1996 National Household Education Survey.* NCES Working Paper. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

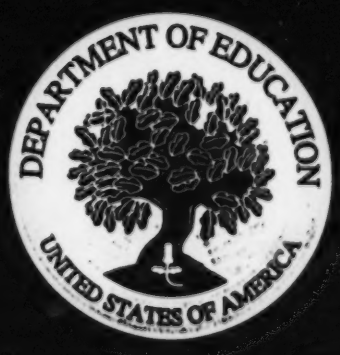
Wolter, K.M. 1985. *Introduction to Variance Estimation.* New York: Springer-Verlag.

United States
Department of Education
Washington, DC 20208-5651

Official Business
Penalty for Private Use, $300

Postage and Fees Paid
U.S. Department of Education
Permit No. G-17

Standard Mail (A)



BEST COPY AVAILABLE